

In The Abstract:

Please replace the following paragraph for the currently appearing paragraph in the Abstract:

~~This invention provides a data packet processing device for processing data packets received from a network, including: a processing means for processing data packets; an interface operable to transmit data packets to and from an external memory; a scheduling means for assigning priority information to received data packets, wherein the priority information determines an order of data packets to be processed; an internal memory to store data packets; a memory managing means operable to store data packets in the external memory and to provide data packets in the internal memory for processing in the processing means, wherein depending on the priority information of each of the data packets, the memory managing means provides the respective data packets assigned by the respective priority information in the internal memory for being processed by the processing means.~~

A data packet processing device and method for processing packets received from a network. The processing device includes: a memory manager device for initially receiving packets and preloading received data packets to an internal memory coupled therewith; an external memory for storing further packets to be processed by the processor; a scheduler for assigning priority information to each data packet initially received to be pre-loaded to the internal memory which determines an order of the data packets to be processed to each received data packet, and storing links to the data packets in a pointer memory for processing by the processor device in the priority order. Packets with a highest priority that are to be processed or to be processed next are pre-loaded in the internal memory and data packets with lower priorities are transferred for storage from the internal memory to the external memory via an interface. The memory manager receives priority information from the scheduler and being coupled to the external and internal memory is further operable to transfer the data packet having the highest priority stored in the external memory to the internal memory to be processed by the processor as one of the next.